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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/702,146 | 11/05/2003 | Larry E. Curtis | SPL-46 / 47181-00283USPT | 7810 |
| 23569 | 7590 | 09/15/2005 | EXAMINER | |
| SQUARE D COMPANY INTELLECTUAL PROPERTY DEPARTMENT 1415 SOUTH ROSELLE ROAD PALATINE, IL 60067 | | | PRETLOW, DEMETRIUS R | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2863 | |

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|----------------------------------|-------------------------------|--|
| Office Action Summary | Application No. 10/702,146 | Applicant(s) CURTIS ET AL. | |
| | Examiner Demetrius R. Pretlow | Art Unit 2863 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17-30, 33-47, 50-63 and 66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 12, 13, 17-23, 25, 28, 29, 33-40, 42, 45, 46, 51-56 and 61 is/are rejected.
- 7) ☒ Claim(s) 8, 10, 11, 14, 24, 26, 27, 30, 41, 43, 44, 47, 57, 59, 60, 62 and 63 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1,3,4,7,9,12,13,17, 19,20, 25, 28, 33,34, 36,37, 50, 52,53,58, 61, 66 are rejected under 35 U.S.C. 102(a) as being anticipated by Chung et al. "Development of Power Quality Diagnosis System for Power Quality Improvement". Given the broadest reasonable interpretation, In reference to claim 1, Chung et al. teach a circuit monitor (PQMS page 1256, right column lines 24-25) coupled to said power distribution system and accumulating data representing said electromagnetic phenomena (sag, swell). Note page 1259, right column lines 17-18. Chung et al. teach circuit monitor being programmed to determining a power quality index for each of said multiple power quality categories (swag, swell, harmonic) and a single overall power quality index for all of said power quality categories. Note page 1259, right column , lines 23-24,27-28 and 30-32.

In reference to claims 17 Chung et al. teach a system networked circuit monitors (PQMS page 1256, right column lines 24-25 and page 1257, right column lines 23 and page 1259 right column, lines 45-46), wherein each of the circuit monitors accumulate and evaluates data representing the electromagnetic phenomena (sag, swell) of

multiple power quality categories (swag, swell, harmonic) of said power distribution system. (Note page 1259, right column lines 17-18 and right column , lines 23-24,27-28 .) and a single overall power quality index for all of said power quality categories. Note page 1259, right column, line to claim 50, Chung et al. teach 30-32.

In reference to claim 50, Chung et al. teach a system networked circuit monitors (PQMS page 1256, right column lines 24-25 and page 1257, right column lines 23 and page 1259 right column, lines 45-46), wherein each of the circuit monitors accumulates data representing said electromagnetic phenomena (sag, swell) and is programmed to determine a power quality index of each of said multiple power quality categories (swag, swell, harmonic). (Note page 1259, right column lines 17-18 and right column , lines 23-24,27-28) and a single overall power quality index for all of said power quality categories. Note page 1259, right column , line to claim 50, Chung et al. teach 30-32.

In reference to claim 34, Chung et al. teach determining an individual power quality index for each of said multiple power quality categories (swag, swell, harmonic). Note page 1259, right column , lines 23-24,27-28, Chung et al. teach determining an overall power quality index for all of said individual power quality indices. Note Chung et al. right column, lines 30-32.

In reference to claims 3,19, 36, 52 Chung et al. teach the determination of a power quality index is quality index is expressed as a single number for each said power quality category. Note right column, line 23-24.

In reference to claims 4,20,37,53 Chung et al. teach combining a plurality of power quality indices from a plurality of power quality categories into a single overall power index. Note Chung et al. right column, lines 29-31.

In reference to claims 7, and 12 Chung et al. teach the power quality categories are selected from voltage sags and voltage flicker. Note page 1259, right column lines, 17 and 18.

In reference to claim 9, 25, 58 Chung et al. teach single overall power quality index for all of said power quality categories is a weighted average of said plurality indices for said power quality categories. Note page 1259, right column lines 27-32.

In reference to claim 13,28, 61 Chung et al. teach where power quality indices for power quality categories are based at least in part on data collected in response to alarm events. Note page 1259, right column lines 12-18.

In reference to claims 33, 66, Chung et al. teach a software application running on a networked personal computer, Note Figure 1 and page 1257, right column line 26.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2,5,6,18, 21,22,23,35,38,39,40,42,45,51,54,55,56 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Chung et al. "Development of Power

Quality Diagnosis System for Power Quality Improvement” in view of Bradley “Applying Predictive maintenance to power Quality”. Given the broadest reasonable interpretation, Chung et al. teach the limitations above. In reference to claims 2, 18, 35, 51.

Chung et al. does not teach wherein circuit monitor is informed of its context with said power distribution system to provide metering configurations and data analysis.

Bradley teach wherein circuit monitor is informed of its context with said power distribution system to provide metering configurations and data analysis. Note Bradley page 231, left column, lines 2-16.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Chung et al. to include the teaching of Bradley because it would allow early warning of incipient problems. Note page 229, left column lines 13-14.

In reference to claim 5, 21, 38, 54 Chung et al. does not teach circuit monitor trends said data representing said electromagnetic phenomena, and said trending of data includes alerting said system when said power quality changes.

Bradley teach circuit monitor trends said data representing said electromagnetic phenomena, and said trending of data includes alerting said system when said power quality changes. Note page 237, left column lines 27-32 and page 230, right column lines 35-37.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Chung et al. to include the teaching of

Bradley because it would allow early warning of incipient problems. Note page 229, left column lines 13-14.

In reference to claim 6, 22,39,55 Chung et al. does not teach at least one power quality category is weighted according to the load type present.

Bradley teach wherein said at least one power quality category is weighted according to the load type present. Note page 230, left column lines 45-49 and right column, lines 1-21.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Chung et al. to include the teaching of Bradley because it would allow early warning of incipient problems. Note page 229, left column lines 13-14.

In reference to claim 23,40, 56 Chung et al. teach power quality categories are selected from voltage sags and voltage flicker. Note page 1259, right column lines, 17 and 18.

In reference to claim 42, Chung et al. teach single overall power quality index for all of said power quality categories is a weighted average of said plurality indices for said power quality categories. Note page 1259, right column lines 27-32.

In reference to claim 45, Chung et al. teach where power quality indices for power quality categories are based at least in part on data collected in response to alarm events. Note page 1259, right column lines 12-18.

In reference to claims 8, 24, 41, 57 the prior art of record does not teach the inclusion of the limitations of an power quality indices for power quality categories involving steady state conditions are based on the percentage time said conditions exist during an evaluation period and the severity of such conditions, and said power quality indices for power quality categories involving abnormal events are based on the number of such events that occur during an evaluation period and the severity of such events. It is these limitations found in each of the claims, as they are **claimed in the combination**, that has not been found, taught or suggested by the prior art of record.

In reference to claims 10,26, 43, 59 the prior art of record does not teach the inclusion of the limitations of an said weighted average is based on the nature of the power distribution facility and the load types in said facility. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record.

In reference to claim 11, 27,44,60 the prior art of record does not teach the inclusion of the limitations of wherein said single overall power quality index for all of said power quality categories is the lowest of said power quality indices for said power quality categories. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record.

In reference to claims 14,30, 47,63 the prior art of record does not teach the inclusion of the limitations of said power quality indices for power quality categories are based at least in part on data collected from networked circuit monitors that include

branch circuit monitors. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record.

In reference to claims 29,46, 62 the prior art of record does not teach the inclusion of the limitations of said power quality indices for power quality categories are based in part on data collected from networked circuit monitors that include branch circuit monitors. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record.

Response to Arguments

Applicant's arguments with respect to claims 1-3,5-18,20-35,37-51 and 53-66 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues that Bradley nor Chung et al. teach a circuit monitor that is programmed to determine a power quality index for each of said multiple power quality categories and a single overall power quality index for all of said power quality categories. Chung et al. teach circuit monitor being programmed to determining a power quality index for each of said multiple power quality categories (swag, swell, harmonic) and a single overall power quality index for all of said power quality categories. Note page 1259, right column , lines 23-24,27-28 and 30-32. Applicant argues that single overall quality index for all said power quality categories is a weighted average of said power quality index. Chung et al. teach single overall power quality index for all of said power quality

categories is a weighted average of said plurality indices for said power quality categories. Note page 1259, right column lines 27-32. Applicant argues that said power indices for power quality categories are based at least in part on data collected in response to alarm events. Chung et al. teach where power quality indices for power quality categories are based at least in part on data collected in response to alarm events. Note page 1259, right column lines 12-18. Claims 8,10,11,14,24,26,27,30,41, 43,44,47,57,59,60,62 and 63 are objected to.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetrius R. Pretlow whose telephone number is (571) 272-2278. The examiner can normally be reached on Mon.-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Demetrius R. Pretlow
Patent Examiner

 9/13/05


MICHAEL NGHIEM
PRIMARY EXAMINER